

AMENDMENTS TO THE CLAIMS

Please replace the pending claims with the following claim listing:

1-36. **(Canceled)**

37. **(Currently Amended)** A laser light source comprising a first laser for generating a laser beam of a wavelength λ_1 , a second laser for generating a laser beam of a wavelength λ_2 , and a nonlinear optical crystal that uses the laser beam of the wavelength λ_1 and the laser beam of the wavelength λ_2 as inputs and outputs a coherent beam having a wavelength λ_3 of a sum frequency that satisfies a relationship of $1/\lambda_1 + 1/\lambda_2 = 1/\lambda_3$, comprising:

two polarization maintaining fibers coupled to outputs of the first and second lasers, respectively; and

a multiplexer for multiplexing outputs of the two polarization maintaining fibers and coupling a multiplexed output to the nonlinear optical crystal,

wherein the second laser is a semiconductor laser and the first laser oscillates in a multimode, [[and]]

wherein the nonlinear optical crystal has a periodically poled structure and a length of the nonlinear optical crystal is 10 – 60 mm,

wherein the polarization maintaining fiber coupled to the output of the first laser has a fiber Bragg grating with a full width of half maximum of 0.5 or less and the first laser and the fiber Bragg grating are configured as a resonator structure, and

wherein the wavelength λ_3 of a sum frequency is a wavelength of 589.3 ± 2 nm that is equivalent to the sodium D line.

38. **(Previously Presented)** The laser light source according to claim 37, wherein, representing refractive indices of the wavelengths λ_1 , λ_2 , and λ_3 by n_1 , n_2 , and n_3 , respectively, the nonlinear optical crystal has a periodically poled structure of a period Λ that satisfies

$$2\pi n_3/\lambda_3 = 2\pi n_1/\lambda_1 + 2\pi n_2/\lambda_2 + 2\pi n_2/\Lambda.$$

39. **(Previously Presented)** The laser light source according to claim 38, wherein, the nonlinear optical crystal has a waveguide structure.

40. **(Previously Presented)** The laser light source according to claim 37, wherein, the wavelength λ_1 is 976 ± 10 nm and the wavelength λ_2 is 1485 ± 20 nm.

41. **(Previously Presented)** The laser light source according to claim 37, wherein, the wavelength λ_1 is 1064 ± 10 nm and the wavelength λ_2 is 1320 ± 20 nm.

42. **(Previously Presented)** The laser light source according to claim 37, wherein, the wavelength λ_1 is 940 ± 10 nm and the wavelength λ_2 is 1565 ± 35 nm.

43. **(Previously Presented)** The laser light source according to claim 40, wherein the second laser for outputting a wavelength $\lambda_2 = 1485\pm 20$ nm is a DFB laser.

44. **(Previously Presented)** The laser light source according to claim 41, wherein the second laser for outputting a wavelength $\lambda_3 = 1320\pm 20$ nm is a DFB laser.

45. **(Previously Presented)** The laser light source according to claim 42, wherein the second laser for outputting a wavelength $\lambda_2 = 1565\pm 35$ nm is a DFB laser.

46-47. **(Canceled)**

48. **(Currently Amended)** The laser light source according to claim ~~[[47]]~~ 37, wherein at least one of the first and second lasers has a first facet that is coupled to the polarization maintaining fiber and a second facet opposite to the first facet, the first facet being specified to have a reflectance of 2% or less and the second facet being specified to have a reflectance of 90% or more.

49. **(Currently Amended)** A laser light source comprising a first laser for generating a laser beam of a wavelength λ_1 , a second laser for generating a laser beam of a wavelength λ_2 , and a nonlinear optical crystal that uses the laser beam of the wavelength λ_1 and the laser beam of the wavelength λ_2 as inputs and outputs a coherent beam having a wavelength λ_3 of a sum frequency that satisfies a relationship of $1/\lambda_1 + 1/\lambda_2 = 1/\lambda_3$, comprising:

two polarization maintaining fibers coupled to outputs of the first and second lasers, respectively; and

a multiplexer for multiplexing outputs of the two polarization maintaining fibers and coupling a multiplexed output to the nonlinear optical crystal,

wherein the second laser is a semiconductor laser and the first laser oscillates in a multimode, [[and]]

wherein the nonlinear optical crystal has a periodically poled structure and a length of the nonlinear optical crystal is 10 – 60 mm,

wherein the polarization maintaining fiber coupled to the output of the first laser has a fiber Bragg grating with a full width of half maximum of 0.5 or less and the first laser and the fiber Bragg grating are configured as a resonator structure, and

wherein the wavelength λ_1 is 940 ± 10 nm, the wavelength λ_2 is 1320 ± 20 nm, and the wavelength λ_3 of the sum frequency is a wavelength of 546.1 ± 5.0 nm corresponding to a yellow range.

50. **(Previously Presented)** The laser light source according to claim 49, wherein, representing refractive indices at the wavelengths λ_1 , λ_2 , and λ_3 by n_1 , n_2 , and n_3 , respectively, the nonlinear optical crystal has a periodically poled structure of a period Λ that satisfies

$$2\pi n_3/\lambda_3 = 2\pi n_1/\lambda_1 + 2\pi n_2/\lambda_2 + 2\pi/\Lambda.$$

51. **(Previously Presented)** The laser light source according to claim 50, wherein the nonlinear optical crystal has a waveguide structure.

52. **(Previously Presented)** The laser light source according to claim 49, wherein the second laser is a DFB laser.

53-54. (Canceled)

55. **(Currently Amended)** The laser light source according to claim [[54]] 49, wherein at least one of the first and second lasers has a first facet that is coupled to the polarization maintaining fiber and a second facet opposite to the first facet, the first facet being specified to have a reflectance of 2% or less and the second facet being specified to have a reflectance of 90% or more.

56. **(Currently Amended)** A laser light source comprising a first laser for generating a laser beam of a wavelength λ_1 , a second laser for generating a laser beam of a wavelength λ_2 , and a nonlinear optical crystal that uses the laser beam of the wavelength λ_1 and the laser beam of the wavelength λ_2 as inputs and outputs a coherent beam having a wavelength λ_3 of a sum frequency that satisfies a relationship of $1/\lambda_1 + 1/\lambda_2 = 1/\lambda_3$, comprising:

two polarization maintaining fibers coupled to outputs of the first and second lasers, respectively; and

a multiplexer for multiplexing outputs of the two polarization maintaining fibers and coupling a multiplexed output to the nonlinear optical crystal,

wherein the second laser is a semiconductor laser and the first laser oscillates in a multimode, [[and]]

wherein the nonlinear optical crystal has a periodically poled structure and a length of the nonlinear optical crystal is 10 – 60 mm,

wherein the polarization maintaining fiber coupled to the output of the first laser has a fiber Bragg grating with a full width of half maximum of 0.5 or less and the first laser and the fiber Bragg grating are configured as a resonator structure, and

wherein the wavelength λ_1 is 980 ± 10 nm, the wavelength λ_2 is 1320 ± 20 nm, and the wavelength λ_3 of the sum frequency is a wavelength of 560.0 ± 5.0 nm corresponding to a yellow range.

57. **(Previously Presented)** The laser light source according to claim 56, wherein, representing refractive indices at the wavelengths λ_1 , λ_2 , and λ_3 by n_1 , n_2 , and n_3 , respectively, the nonlinear optical crystal has a periodically poled structure of a period Λ that satisfies

$$2\pi n_3/\lambda_3 = 2\pi n_1/\lambda_1 + 2\pi n_2/\lambda_2 + 2\pi n_2/\Lambda.$$

58. **(Previously Presented)** The laser light source according to claim 57, wherein the nonlinear optical crystal has a waveguide structure.

59. **(Previously Presented)** The laser light source according to claim 56, wherein the second laser is a DFB laser.

60-61. **(Canceled)**

62. **(Previously Presented)** The laser light source according to claim ~~[[61]]~~ 56, wherein at least one of the first and second lasers has a first facet that is coupled to the polarization maintaining fiber and a second facet opposite to the first facet, the first facet being specified to have a reflectance of 2% or less and the second facet being specified to have a reflectance of 90% or more.

63. **(Currently Amended)** A laser light source comprising a first laser for generating a laser beam of a wavelength λ_1 , a second laser for generating a laser beam of a wavelength λ_2 , and a nonlinear optical crystal that uses the laser beam of the wavelength λ_1 and the laser beam of a wavelength λ_2 as inputs and outputs a coherent beam having a wavelength λ_3 of a sum frequency that satisfies a relationship of $1/\lambda_1 + 1/\lambda_2 = 1/\lambda_3$, comprising:

two polarization maintaining fibers coupled to outputs of the first and second lasers, respectively; and

a multiplexer for multiplexing outputs of the two polarization maintaining fibers and coupling a multiplexed output to the nonlinear optical crystal,

wherein the second laser is a semiconductor laser and the first laser oscillates in a multimode, [[and]]

wherein the nonlinear optical crystal has a periodically poled structure and a length of the nonlinear optical crystal is 10 – 60 mm,

wherein the polarization maintaining fiber coupled to the output of the first laser has a fiber Bragg grating with a full width of half maximum of 0.5 or less and the first laser and the fiber Bragg grating are configured as a resonator structure, and

wherein the wavelength λ_1 is 1064 ± 10 nm, the wavelength λ_2 is 1320 ± 20 nm, and the wavelength λ_3 of the sum frequency is a wavelength of 585.0 ± 5.0 nm corresponding to a yellow range.

64. **(Previously Presented)** The laser light source according to claims 63, wherein, representing refractive indices at the wavelengths λ_1 , λ_2 , and λ_3 by n_1 , n_2 , and n_3 , respectively, the nonlinear optical crystal has a periodically poled structure of a period Λ that satisfies

$$2\pi n_3/\lambda_3 = 2\pi n_1/\lambda_1 + 2\pi n_2/\lambda_2 + 2\pi/\Lambda.$$

65. **(Previously Presented)** The laser light source according to claim 64, wherein the nonlinear optical crystal has a waveguide structure.

66. **(Previously Presented)** The laser light source according to claim 63, wherein the second laser is a DFB laser.

67-68. (Canceled)

69. **(Currently Amended)** The laser light source according to claim [[68]] 63, wherein at least one of the first and second lasers has a first facet that is coupled to the polarization maintaining fiber and a second facet opposite to the first facet, the first facet being specified to have a reflectance of 2% or less and the second facet being specified to have a reflectance of 90% or more.

70. **(Currently Amended)** A laser light source comprising a first laser for generating a laser beam of a wavelength λ_1 , a second laser for generating a laser beam of a wavelength λ_2 , and a nonlinear optical crystal that uses the laser beam of the wavelength λ_1 and the laser beam of the wavelength λ_2 as inputs and outputs a coherent beam having a wavelength λ_3 of a sum frequency that satisfies a relationship of $1/\lambda_1 + 1/\lambda_2 = 1/\lambda_3$, comprising:

two polarization maintaining fibers coupled to outputs of the first and second lasers, respectively; and

a multiplexer for multiplexing outputs of the two polarization maintaining fibers and coupling a multiplexed output to the nonlinear optical crystal,

wherein the second laser is a semiconductor laser and the first laser oscillates in a multimode, [[and]]

wherein the nonlinear optical crystal has a periodically poled structure and a length of the nonlinear optical crystal is 10 – 60 mm,

wherein the polarization maintaining fiber coupled to the output of the first laser has a fiber Bragg grating with a full width of half maximum of 0.5 or less and the first laser and the fiber Bragg grating are configured as a resonator structure, and

wherein the wavelength λ_1 is 940 ± 10 nm, the wavelength λ_2 is 1550 ± 30 nm, and the wavelength λ_3 of the sum frequency is a wavelength of 585.0 ± 5.0 nm corresponding to a yellow range.

71. **(Previously Presented)** The laser light source according to claim 70, wherein, representing refractive indices at the wavelengths λ_1 , λ_2 , and λ_3 by n_1 , n_2 , and n_3 , respectively, the nonlinear optical crystal has a periodically poled structure of a period Λ that satisfies

$$2\pi n_3/\lambda_3 = 2\pi n_1/\lambda_1 + 2\pi n_2/\lambda_2 + 2\pi n_2/\Lambda.$$

72. **(Previously Presented)** The laser light source according to claim 71, wherein the nonlinear optical crystal has a waveguide structure.

73. **(Previously Presented)** The laser light source according to claim 70, wherein the second laser is a DFB laser.

74-75. **(Canceled)**

76. **(Currently Amended)** The laser light source according to claim [[75]] 70, wherein at least one of the first and second lasers has a first facet that is coupled to the polarization maintaining fiber and a second facet opposite to the first facet, the first facet being specified to have a reflectance of 2% or less and the second facet being specified to have a reflectance of 90% or more.

77. **(Currently Amended)** A laser light source comprising a first laser for generating a laser beam of a wavelength λ_1 , a second laser for generating a laser beam of a wavelength λ_2 , and a nonlinear optical crystal that uses the laser beam of the wavelength λ_1 and the laser beam of the wavelength λ_2 as inputs and outputs a coherent beam having a wavelength λ_3 of a sum frequency that satisfies a relationship of $1/\lambda_1 + 1/\lambda_2 = 1/\lambda_3$, comprising:

two polarization maintaining fibers coupled to outputs of the first and second lasers, respectively; and

a multiplexer for multiplexing outputs of the two polarization maintaining fibers and coupling a multiplexed output to the nonlinear optical crystal,

wherein the first laser is a semiconductor laser in a single mode oscillation,

the second laser is a DFB laser,

the polarization maintaining fiber coupled to the second laser has a fiber Bragg grating with a full width of half maximum of 0.5 or less and the second laser and the fiber Bragg grating are configured as a resonator structure.

the nonlinear optical crystal has a periodically poled structure and a length of the nonlinear optical crystal is 10 – 60 mm, and

the wavelength λ_1 is 976 ± 10 nm, the wavelength λ_2 is 1485 ± 20 nm, the wavelength λ_3 of a sum frequency is a wavelength of 589.3 ± 2 nm that is equivalent to the sodium D line.

78. **(Previously Presented)** The laser light source according to claim 77, wherein, representing refractive indices of the wavelengths λ_1 , λ_2 , and λ_3 by n_1 , n_2 , and n_3 , respectively, the nonlinear optical crystal has a periodically poled structure of a period Λ that satisfies

$$2\pi n_3/\lambda_3 = 2\pi n_1/\lambda_1 + 2\pi n_2/\lambda_2 + 2\pi n_2/\Lambda.$$

79. **(Previously Presented)** The laser light source according to claim 78, wherein, the nonlinear optical crystal has a waveguide structure.

80. **(Currently Amended)** A laser light source comprising a first laser for generating a laser beam of a wavelength λ_1 , a second laser for generating a laser beam of a wavelength λ_2 , and a nonlinear optical crystal that uses the laser beam of the wavelength λ_1 and the laser beam of the wavelength λ_2 as inputs and outputs a coherent beam having a wavelength λ_3 of a sum frequency that satisfies a relationship of $1/\lambda_1 + 1/\lambda_2 = 1/\lambda_3$, comprising:

two polarization maintaining fibers coupled to outputs of the first and second lasers, respectively; and

a multiplexer for multiplexing outputs of the two polarization maintaining fibers and coupling a multiplexed output to the nonlinear optical crystal,

wherein the first laser is a semiconductor laser in a single mode oscillation,

the second laser is a DFB laser,

the polarization maintaining fiber coupled to the second laser has a fiber Bragg grating with a full width of half maximum of 0.5 or less and the second laser and the fiber Bragg grating are configured as a resonator structure.

the nonlinear optical crystal has a periodically poled structure and a length of the nonlinear optical crystal is 10 – 60 mm, and

the wavelength λ_1 is 1064 ± 10 nm, the wavelength λ_2 is 1320 ± 20 nm, the wavelength λ_3 of a sum frequency is a wavelength of 589.3 ± 2 nm that is equivalent to the sodium D line.

81. **(Previously Presented)** The laser light source according to claim 80, wherein, representing refractive indices of the wavelengths λ_1 , λ_2 , and λ_3 by n_1 , n_2 , and n_3 , respectively, the nonlinear optical crystal has a periodically poled structure of a period Λ that satisfies

$$2\pi n_3/\lambda_3 = 2\pi n_1/\lambda_1 + 2\pi n_2/\lambda_2 + 2\pi/\Lambda.$$

82. **(Previously Presented)** The laser light source according to claim 81, wherein, the nonlinear optical crystal has a waveguide structure.

83. **(Currently Amended)** A laser light source comprising a first laser for generating a laser beam of a wavelength λ_1 , a second laser for generating a laser beam of a wavelength λ_2 , and a nonlinear optical crystal that uses the laser beam of the wavelength λ_1 and the laser beam of the wavelength λ_2 as inputs and outputs a coherent beam having a wavelength λ_3 of a sum frequency that satisfies a relationship of $1/\lambda_1 + 1/\lambda_2 = 1/\lambda_3$, comprising:

two polarization maintaining fibers coupled to outputs of the first and second lasers, respectively; and

a multiplexer for multiplexing outputs of the two polarization maintaining fibers and coupling a multiplexed output to the nonlinear optical crystal,

wherein the first laser is a semiconductor laser in a single mode oscillation,

the second laser is a DFB laser,

the polarization maintaining fiber coupled to the second laser has a fiber Bragg grating with a full width of half maximum of 0.5 or less and the second laser and the fiber Bragg grating are configured as a resonator structure.

the nonlinear optical crystal has a periodically poled structure and a length of the nonlinear optical crystal is 10 – 60 mm, and

the wavelength λ_1 is 940 ± 10 nm, the wavelength λ_2 is 1565 ± 35 nm, the wavelength λ_3 of a sum frequency is a wavelength of 589.3 ± 2 nm that is equivalent to the sodium D line.

84. **(Previously Presented)** The laser light source according to claim 83, wherein, representing refractive indices of the wavelengths λ_1 , λ_2 , and λ_3 by n_1 , n_2 , and n_3 , respectively, the nonlinear optical crystal has a periodically poled structure of a period Λ that satisfies

$$2\pi n_3/\lambda_3 = 2\pi n_1/\lambda_1 + 2\pi n_2/\lambda_2 + 2\pi n_2/\Lambda.$$

85. **(Previously Presented)** The laser light source according to claim 84, wherein, the nonlinear optical crystal has a waveguide structure.

86. **(Currently Amended)** A laser light source comprising a first laser for generating a laser beam of a wavelength λ_1 , a second laser for generating a laser beam of a wavelength λ_2 , and a nonlinear optical crystal that uses the laser beam of the wavelength λ_1 and the laser beam of the wavelength λ_2 as inputs and outputs a coherent beam having a wavelength λ_3 of a sum frequency that satisfies a relationship of $1/\lambda_1 + 1/\lambda_2 = 1/\lambda_3$, comprising:

two polarization maintaining fibers coupled to outputs of the first and second lasers, respectively; and

a multiplexer for multiplexing outputs of the two polarization maintaining fibers and coupling a multiplexed output to the nonlinear optical crystal,

wherein the first laser is a semiconductor laser in a single mode oscillation,

the second laser is a DFB laser,

the polarization maintaining fiber coupled to the second laser has a fiber Bragg grating with a full width of half maximum of 0.5 or less and the second laser and the fiber Bragg grating are configured as a resonator structure.

the nonlinear optical crystal has a periodically poled structure and a length of the nonlinear optical crystal is 10 – 60 mm, and

the wavelength λ_1 is 940 ± 10 nm, the wavelength λ_2 is 1320 ± 20 nm, and the wavelength λ_3 of the sum frequency is a wavelength of 546.1 ± 5.0 nm corresponding to a yellow range.

87. **(Previously Presented)** The laser light source according to claim 86, wherein, representing refractive indices of the wavelengths λ_1 , λ_2 , and λ_3 by n_1 , n_2 , and n_3 , respectively, the nonlinear optical crystal has a periodically poled structure of a period Λ that satisfies

$$2\pi n_3/\lambda_3 = 2\pi n_1/\lambda_1 + 2\pi n_2/\lambda_2 + 2\pi/\Lambda.$$

88. **(Previously Presented)** The laser light source according to claim 87, wherein, the nonlinear optical crystal has a waveguide structure.

89. **(Currently Amended)** A laser light source comprising a first laser for generating a laser beam of a wavelength λ_1 , a second laser for generating a laser beam of a wavelength λ_2 , and a nonlinear optical crystal that uses the laser beam of the wavelength λ_1 and the laser beam of the wavelength λ_2 as inputs and outputs a coherent beam having a wavelength λ_3 of a sum frequency that satisfies a relationship of $1/\lambda_1 + 1/\lambda_2 = 1/\lambda_3$, comprising:

two polarization maintaining fibers coupled to outputs of the first and second lasers, respectively; and

a multiplexer for multiplexing outputs of the two polarization maintaining fibers and coupling a multiplexed output to the nonlinear optical crystal,

wherein the first laser is a semiconductor laser in a single mode oscillation,

the second laser is a DFB laser,

the polarization maintaining fiber coupled to the second laser has a fiber Bragg grating with a full width of half maximum of 0.5 or less and the second laser and the fiber Bragg grating are configured as a resonator structure.

the nonlinear optical crystal has a periodically poled structure and a length of the nonlinear optical crystal is 10 – 60 mm, and

the wavelength λ_1 is 980 ± 10 nm, the wavelength λ_2 is 1320 ± 20 nm, and the wavelength λ_3 of the sum frequency is a wavelength of 560.0 ± 5.0 nm corresponding to a yellow range.

90. **(Previously Presented)** The laser light source according to claim 89, wherein, representing refractive indices of the wavelengths λ_1 , λ_2 , and λ_3 by n_1 , n_2 , and n_3 , respectively, the nonlinear optical crystal has a periodically poled structure of a period Λ that satisfies

$$2\pi n_3/\lambda_3 = 2\pi n_1/\lambda_1 + 2\pi n_2/\lambda_2 + 2\pi n_2/\Lambda.$$

91. **(Previously Presented)** The laser light source according to claim 90, wherein, the nonlinear optical crystal has a waveguide structure.

92. **(Currently Amended)** A laser light source comprising a first laser for generating a laser beam of a wavelength λ_1 , a second laser for generating a laser beam of a wavelength λ_2 , and a nonlinear optical crystal that uses the laser beam of the wavelength λ_1 and the laser beam of the wavelength λ_2 as inputs and outputs a coherent beam having a wavelength λ_3 of a sum frequency that satisfies a relationship of $1/\lambda_1 + 1/\lambda_2 = 1/\lambda_3$, comprising:

two polarization maintaining fibers coupled to outputs of the first and second lasers, respectively; and

a multiplexer for multiplexing outputs of the two polarization maintaining fibers and coupling a multiplexed output to the nonlinear optical crystal,

wherein the first laser is a semiconductor laser in a single mode oscillation,

the second laser is a DFB laser,

the polarization maintaining fiber coupled to the second laser has a fiber Bragg grating with a full width of half maximum of 0.5 or less and the second laser and the fiber Bragg grating are configured as a resonator structure.

the nonlinear optical crystal has a periodically poled structure and a length of the nonlinear optical crystal is 10 – 60 mm, and

the wavelength λ_1 is 1064 ± 10 nm, the wavelength λ_2 is 1320 ± 20 nm, and the wavelength λ_3 of the sum frequency is a wavelength of 585.0 ± 5.0 nm corresponding to a yellow range.

93. **(Previously Presented)** The laser light source according to claim 92, wherein, representing refractive indices of the wavelengths λ_1 , λ_2 , and λ_3 by n_1 , n_2 , and n_3 , respectively, the nonlinear optical crystal has a periodically poled structure of a period Λ that satisfies

$$2\pi n_3/\lambda_3 = 2\pi n_1/\lambda_1 + 2\pi n_2/\lambda_2 + 2\pi n_2/\Lambda.$$

94. **(Previously Presented)** The laser light source according to claim 93, wherein, the nonlinear optical crystal has a waveguide structure.

95. **(Currently Amended)** A laser light source comprising a first laser for generating a laser beam of a wavelength λ_1 , a second laser for generating a laser beam of a wavelength λ_2 , and a nonlinear optical crystal that uses the laser beam of the wavelength λ_1 and the laser beam of the wavelength λ_2 as inputs and outputs a coherent beam having a wavelength λ_3 of a sum frequency that satisfies a relationship of $1/\lambda_1 + 1/\lambda_2 = 1/\lambda_3$, comprising:

two polarization maintaining fibers coupled to outputs of the first and second lasers, respectively; and

a multiplexer for multiplexing outputs of the two polarization maintaining fibers and coupling a multiplexed output to the nonlinear optical crystal,

wherein the first laser is a semiconductor laser in a single mode oscillation,

the second laser is a DFB laser,

the polarization maintaining fiber coupled to the second laser has a fiber Bragg grating with a full width of half maximum of 0.5 or less and the second laser and the fiber Bragg grating are configured as a resonator structure.

the nonlinear optical crystal has a periodically poled structure and a length of the nonlinear optical crystal is 10 – 60 mm, and

the wavelength λ_1 is 940 ± 10 nm, the wavelength λ_2 is 1550 ± 30 nm, and the wavelength λ_3 of the sum frequency is a wavelength of 585.0 ± 5.0 nm corresponding to a yellow range.

96. **(Previously Presented)** The laser light source according to claim 95, wherein, representing refractive indices of the wavelengths λ_1 , λ_2 , and λ_3 by n_1 , n_2 , and n_3 , respectively, the nonlinear optical crystal has a periodically poled structure of a period Λ that satisfies

$$2\pi n_3/\lambda_3 = 2\pi n_1/\lambda_1 + 2\pi n_2/\lambda_2 + 2\pi n_2/\Lambda.$$

97. **(Previously Presented)** The laser light source according to claim 96, wherein, the nonlinear optical crystal has a waveguide structure.